

REMARKS

Applicant respectfully request reconsideration in view of the following remarks. The applicant has rewritten claims 5 and 13 into independent form. The applicant has cancelled 7 claims and added 6 claims. Support for newly added claims 17-19 correspond to claims 2-4. Support for newly added claims 20-22 correspond to claims 2-4. The amendment raises no new issues and requires no new search. The applicant has rewritten claims 5 and 13 into the independent form. The new claims 17-22 correspond to claims 2-4. These features have already been searched by the Examiner.

Claims 1-4, 8-10, and 13-14 are rejected under 35 U.S.C. 102(a) as being anticipated by US 6,130,181 (Schwab). Claims 1-10, and 13-16 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,898,092 (Commereuc). Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schwab and Commereuc in view of US 5,055,019 (Meyer). Claims 5-6, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwab in view of 6,391,072 (Garg). Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schwab or Commereuc in view of Meyer. The applicant respectfully traverses these rejections.

The applicant has two independent claims (claims 5 and 13). In the present Office Action, the Examiner repeats the previous rejections from the last Office Action. In order to expedite prosecution, the applicant has cancelled the catalyst claims. The claims of the application are now all directed to a process for producing a supported catalyst.

Commereuc in the abstract discloses

A process for the preparation of a catalyst comprising **impregnating a compound of rhenium on a porous support formed by refractory oxides and/or alumino-silicates of an acid, neutral or basic nature, roasting at a temperature of from 200 to 950 °C and impregnating with said aluminum**

compound. (emphasis added)

Schwab discloses at col. 3, line 46 to col4, line 43,

The novel catalysts are prepared using two special preparation processes:

Process A:

In process A, the novel catalysts are prepared by pore impregnation with a rhenium-containing solution, where the impregnation solution is heated to from 40⁰ C. to 80⁰ C., preferably from 50⁰ C. to 70⁰ C., before the impregnation. An important factor regarding the properties of the novel catalysts is that only the impregnation solution is heated to from 40⁰ C. to 80⁰ C., while the support is kept at room temperature. After application of the impregnation solution to the support, the impregnation solution is allowed to act on the support for a further 1 to 30 minutes, preferably from 5 to 20 minutes, before the solvent is removed by drying. The drying is carried out at from 80⁰ C. to 170⁰ C., preferably at from 100⁰ C. to 150⁰ C., for a period of from 1 to 48 hours, preferably for from 12 to 24 hours. The drying can be carried out with or without agitation.

The solvent used is preferably water. Examples of suitable rhenium precursors for this preparation variant are ammonium perrhenate, alkali metal perrhenates, aqueous perrhenic acid solution and rhenium(VII) oxide, preferably ammonium perrhenate.

Process B:

In process B, the support is introduced into a revolvable impregnation drum, which is revolved at from 2 to 100 revolutions per minute, preferably at from 5 to 20 revolutions per minute. The agitated support is sprayed with a rhenium-containing solution, where the amount of solution corresponds to the pore volume of the introduced support and the amount of solution is sprayed on over the course of 1 to 120 minutes, preferably from 5 to 60 minutes, particularly preferably from 10 to 30 minutes. After application of the impregnation solution to the support, the impregnation solution is allowed to act on the agitated support for a further 1 to a maximum of 30 minutes, preferably from 5 to 20 minutes, before the solvent is removed by drying. The drying is carried out at from 80⁰C to 170⁰C., preferably at from 100 to 150⁰C., for a period of from 1 to 48 hours, preferably for from 12 to 24 hours. The drying can be carried out with or without agitation.

The solvent used is preferably water. Examples of suitable rhenium precursors for this process variant are ammonium perrhenate, alkali metal perrhenates, aqueous perrhenic acid solution and rhenium(VII) oxide, preferably aqueous perrhenic acid solution.

Before use, the novel catalysts are activated in situ by calcination at from 400 to

700°C., preferably at from 500 to 600°C.

The novel catalysts are distinguished compared with the Re_2O_7 -containing supported catalysts known from the literature by high catalytic activities and selectivities in metathesis reactions. The novel catalysts are particularly distinguished by cycle times of at least 10 days (a cycle here is taken to mean the time in which the catalytic activity of the catalyst has dropped to half the initial activity of the catalyst at the beginning of the cycle) and by the fact that, after completion of a cycle, the catalytic activity can be restored completely, but at least to a level of 99% compared with the initial activity of the fresh catalyst, by calcination of the spent catalyst at 400-600°C. in a stream of air and cooling under an inert gas. In addition, the novel catalysts can be regenerated at least forty times, giving very long service lives of at least one year (service life=cycle x number of cycles), which really make economical performance of metathesis processes possible.

None of the applied references disclose a process for preparing such catalysts in a way as it is claimed in independent claims 5 and 13 of the present application. In none of the documents it is suggested to use such a preparation to yield a catalyst as specified in former claim 1. For the above reasons, these rejections should be withdrawn.

In view of the above amendment, applicant believes the pending application is in condition for allowance. Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 13156-00070-US from which the undersigned is authorized to draw.

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Respectfully submitted,

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